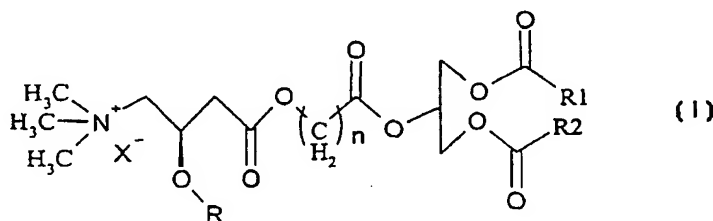




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(21) International Application Number: PCT/IT00/00137 (22) International Filing Date: 11 April 2000 (11.04.00) (30) Priority Data: RM99A000220      13 April 1999 (13.04.99)      IT (71) Applicant (for all designated States except US): SIGMA-TAU INDUSTRIE FARMACEUTICHE RIUNITE S.P.A. [IT/IT]; Viale Shakespeare, 47, I-00144 Rome (IT). (72) Inventors; and (75) Inventors/Applicants (for US only): PISANO, Claudio [IT/IT]; Via San Michele, 30, I-04011 Aprilia (IT). TINTI, Maria, Omella [IT/IT]; Via Ernesto Basile, 82, I-00182 Rome (IT). SANTANIELLO, Mosè [IT/IT]; Via dei Giardini, 15, I-00048 Nettuno (IT). CRITELLI, Luciana [IT/IT]; Via Don Luigi Sturzo, 22, I-00040 Pomezia (IT). SALVATORI, Giovanni [IT/IT]; Via Giuseppe Perego, 47, I-00144 Rome (IT). (74) Agent: SPADARO, Marco; Sigma-Tau Industrie Farmaceu- tiche Riunite S.p.A., Viale Shakespeare, 47, I-00144 Rome (IT).	(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  Published Without international search report and to be republished upon receipt of that report.	

(54) Title: ESTERS OF L-CARNITINE OR ALKANOYL L-CARNITINES USEFUL AS CATIONIC LIPIDS FOR THE INTRACELLULAR DELIVERY OF PHARMACOLOGICALLY ACTIVE COMPOUNDS



## (57) Abstract

Esters of L-carnitine and alkanoyl L-carnitines are described which can be used as cationic lipids for the intracellular delivery of pharmacologically active compounds. New esters of L-carnitine and alkanoyl L-carnitines of formula (I) are also disclosed wherein the R groups are as defined in the description.